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L7: Entry 1 of 2

File: USPT

Sep 21, 1993

US-PAT-NO: 5247591

DOCUMENT-IDENTIFIER: US 5247591 A

TITLE: Method and apparatus for the primary and secondary routing of fax messages using hand printed characters

DATE-ISSUED: September 21, 1993

INVENTOR-INFORMATION:

| NAME        | CITY     | STATE | ZIP CODE | COUNTRY |
|-------------|----------|-------|----------|---------|
| Baran; Paul | Atherton | CA    |          |         |

ASSIGNEE-INFORMATION:

| NAME           | CITY      | STATE | ZIP CODE | COUNTRY | TYPE CODE |
|----------------|-----------|-------|----------|---------|-----------|
| Interfax, Inc. | Sunnyvale | CA    |          |         | 02        |

APPL-NO: 07/596058   [\[PALM\]](#)

DATE FILED: October 10, 1990

INT-CL: [05] H04N 1/24

US-CL-ISSUED: 382/61; 382/46, 358/402, 358/440, 283/117

US-CL-CURRENT: 382/179; 283/117, 358/402, 358/440, 382/317

FIELD-OF-SEARCH: 382/61, 382/11, 382/13, 382/46, 283/61, 283/62, 283/117, 209/3.3, 209/3.1, 358/440, 358/434, 358/403, 358/402, 235/494, 385/467

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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|                          | PAT-NO         | ISSUE-DATE     | PATENTEE-NAME    | US-CL   |
|--------------------------|----------------|----------------|------------------|---------|
| <input type="checkbox"/> | <u>3558859</u> | January 1971   | Dilsner et al.   | 382/61  |
| <input type="checkbox"/> | <u>3995741</u> | December 1976  | Henderson        | 209/3.3 |
| <input type="checkbox"/> | <u>4180798</u> | December 1979  | Komori et al.    | 382/14  |
| <input type="checkbox"/> | <u>4187520</u> | February 1980  | Beduchaud et al. | 358/426 |
| <input type="checkbox"/> | <u>4275398</u> | June 1981      | Siegal           | 382/11  |
| <input type="checkbox"/> | <u>4352012</u> | September 1982 | Verderber et al. | 358/498 |
| <input type="checkbox"/> | <u>4776464</u> | October 1988   | Miller et al.    | 209/3.3 |

|                          |                |               |                     |         |
|--------------------------|----------------|---------------|---------------------|---------|
| <input type="checkbox"/> | <u>4893333</u> | January 1990  | Baran et al.        | 358/468 |
| <input type="checkbox"/> | <u>4924078</u> | May 1990      | Sant'Anselmo et al. | 235/494 |
| <input type="checkbox"/> | <u>4941170</u> | July 1990     | Herbst              | 358/440 |
| <input type="checkbox"/> | <u>4978145</u> | December 1990 | Mikhail             | 283/71  |
| <input type="checkbox"/> | <u>5001572</u> | March 1991    | Hashimoto et al.    | 358/440 |
| <input type="checkbox"/> | <u>5059775</u> | October 1991  | Nakayama            | 235/494 |
| <input type="checkbox"/> | <u>5091790</u> | February 1992 | Silverberg et al.   | 358/440 |
| <input type="checkbox"/> | <u>5095373</u> | March 1992    | Hisano              | 358/402 |
| <input type="checkbox"/> | <u>5115326</u> | May 1992      | Burgess et al.      | 358/440 |
| <input type="checkbox"/> | <u>5133026</u> | July 1992     | Fujiwara et al.     | 382/46  |

## FOREIGN PATENT DOCUMENTS

| FOREIGN-PAT-NO | PUBN-DATE     | COUNTRY | CLASS |
|----------------|---------------|---------|-------|
| 62-272751      | November 1987 | JP      |       |

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ART-UNIT: 263

PRIMARY-EXAMINER: Razavi; Michael T.

ASSISTANT-EXAMINER: Klocinski; Steven P.

ATTY-AGENT-FIRM: Jones; Allston L.

## ABSTRACT:

The present invention includes an open-ended set of cover sheet forms that may be readily interpreted by the fax server system. In this system a first standardized cover sheet is designed to accept hand printed characters. This first cover sheet is then transmitted to a special fax server as part of this invention to create an alternative, fully detached cover sheet for automatic transmission to its specific recipient. Labor is minimized by allowing the sender to hand print a minimal amount of highly constrained telephone numbers, or the initials of the recipient onto a draft cover sheet when a mailing list has been previously stored in the memory associated with the special fax server. The first cover sheet is optionally automatically replaced by a second and final neatly printed cover sheet in which the abbreviated information is expanded using pre-stored information to provide sufficient information to allow the secondary fax message cover sheets to be routed by a human or a machine to be delivered to the intended recipient. The present invention acts as a bridge between today's manually prepared cover sheets and those capabilities found in E-mail systems that automatically route and store messages as well as processing other non-obvious features.

11 Claims, 12 Drawing figures

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L7: Entry 2 of 2

File: USPT

Jul 13, 1993

US-PAT-NO: 5227778

DOCUMENT-IDENTIFIER: US 5227778 A

TITLE: Service name to network address translation in communications network

DATE-ISSUED: July 13, 1993

## INVENTOR-INFORMATION:

| NAME            | CITY      | STATE | ZIP CODE | COUNTRY |
|-----------------|-----------|-------|----------|---------|
| Vacon; Gary V.  | Melrose   | MA    |          |         |
| Visser; John A. | Wakefield | MA    |          |         |

## ASSIGNEE-INFORMATION:

| NAME                          | CITY    | STATE | ZIP CODE | COUNTRY | TYPE CODE |
|-------------------------------|---------|-------|----------|---------|-----------|
| Digital Equipment Corporation | Maynard | MA    |          |         | 02        |

APPL-NO: 07/681552   [\[PALM\]](#)

DATE FILED: April 5, 1991

INT-CL: [05] H04B 1/00

US-CL-ISSUED: 340/825.52; 370/85.1, 370/94.1

US-CL-CURRENT: 340/825.52; 370/445, 370/449

FIELD-OF-SEARCH: 340/325.52, 340/825.06, 340/825.07, 340/825.08, 370/85.1, 370/85.5, 370/85.8, 370/85.9, 370/85.11, 370/92, 370/93, 370/94.1

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

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| PAT-NO                                  | ISSUE-DATE    | PATENTEE-NAME | US-CL      |
|---|---------------|---------------|------------|
| <input type="checkbox"/> <u>3643030</u> | February 1972 | Sparrendahl   |            |
| <input type="checkbox"/> <u>4707828</u> | November 1987 | Yamada        | 370/85     |
| <input type="checkbox"/> <u>4713805</u> | December 1987 | Henaff        | 370/85     |
| <input type="checkbox"/> <u>4818984</u> | April 1989    | Chang et al.  | 340/825.54 |
| <input type="checkbox"/> <u>4823122</u> | April 1989    | Mann et al.   | 340/825.28 |
| <input type="checkbox"/> <u>4959015</u> | July 1988     | Takai et al.  | 370/86     |

☐ 5025491      January 1991      Tsuchiya et al.      340/825.52

ART-UNIT: 264

PRIMARY-EXAMINER: Yusko; Donald J.

ASSISTANT-EXAMINER: Magistre; Dervis

ATTY-AGENT-FIRM: Arnold, White & Durkee

ABSTRACT:

A data communications network having a number of servers and a number of service providers employs an improved protocol for translating service names to network addresses. A server sends a multi-cast message to all service providers requesting a service needed by one of the user terminals connected to this server. In the request, the service is identified by function, rather than by address. Any node which provides this service, receiving the request and able to reply, sends a reply message immediately to the server. The reply message identifies the node (service provider) by network address, so a transaction with this provider can be initiated by the server immediately. If the service provider cannot reply, a third party node can send a reply to identify the provider by address. If the server does not receive a reply from either the provider or a third party, then a cache of network addresses of services most recently used by the server is searched for this particular service. The cache may include a separate local cache for each user terminal connected to this server, with each local cache containing the service and address for the last-used service for one of the user terminals. In addition, a secondary cache is maintained for all items replaced in the local caches when they are updated. When the cache is searched (both local and secondary), if the service address is found, a transaction is begun immediately by the server to utilize the service. If not found in the cache, the server waits for a service advertisement to appear on the network, and obtains the network address of the provider from the advertisement.

34 Claims, 8 Drawing figures

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L9: Entry 1 of 2

File: USPT

Jul 6, 1999

US-PAT-NO: 5920847

DOCUMENT-IDENTIFIER: US 5920847 A

TITLE: Electronic bill pay system

DATE-ISSUED: July 6, 1999

## INVENTOR-INFORMATION:

| NAME              | CITY       | STATE | ZIP CODE | COUNTRY |
|-------------------|------------|-------|----------|---------|
| Kolling; Ray      | Menlo Park | CA    |          |         |
| Powar; William L. | Palo Alto  | CA    |          |         |

## ASSIGNEE-INFORMATION:

| NAME                                   | CITY        | STATE | ZIP CODE | COUNTRY | TYPE | CODE |
|--|-------------|-------|----------|---------|------|------|
| Visa International Service Association | Foster City | CA    |          |         | 02   |      |

APPL-NO: 08/726642 [PALM]

DATE FILED: October 7, 1996

## PARENT-CASE:

CROSS REFERENCE TO RELATED APPLICATIONS This application is a continuation-in-part of application Ser. No. 08/552,586, filed Nov. 3, 1995 which is a continuation of application Ser. No. 08/146,515, entitled "ELECTRONIC BILL PAY SYSTEM", filed Nov. 1, 1993 and issued as U.S. Pat. No. 5,465,206 on Nov. 7, 1995. Those applications are incorporated herein by reference for all purposes.

INT-CL: [06] G06 F 17/60

US-CL-ISSUED: 705/40; 705/44, 705/45

US-CL-CURRENT: 705/40; 705/44, 705/45

FIELD-OF-SEARCH: 705/1, 705/30, 705/34, 705/35, 705/39, 705/40, 705/42, 705/44

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

|                          | PAT-NO         | ISSUE-DATE   | PATENTEE-NAME | US-CL |
|--------------------------|----------------|--------------|---------------|-------|
| <input type="checkbox"/> | <u>4270042</u> | May 1981     | Case          |       |
| <input type="checkbox"/> | <u>4799156</u> | January 1989 | Shavit et al. |       |
|                          | <u>4823264</u> | April 1989   | Deming        |       |

|                          |                |               |               |
|--------------------------|----------------|---------------|---------------|
| <input type="checkbox"/> |                |               |               |
| <input type="checkbox"/> | <u>4947028</u> | August 1990   | Gorog         |
| <input type="checkbox"/> | <u>5093787</u> | March 1992    | Simmons       |
| <input type="checkbox"/> | <u>5220501</u> | June 1993     | Lawlor et al. |
| <input type="checkbox"/> | <u>5283829</u> | February 1994 | Anderson      |

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EFT in United States; Policy Recommendations and the Public Interest; The Final Report of the National Commission on Electronic Fund Transfers; Oct. 28, 1977.

ART-UNIT: 271

PRIMARY-EXAMINER: Tkacs; Stephen R.

#### ABSTRACT:

A bill pay system wherein participating consumers pay bills to participating billers through a payment network operating according to preset rules. The participating consumers receive bills from participating billers (paper/mail bills, e-mail notices, implied bills for automatic debits) which indicate an amount, and a unique biller identification number. To authorize a remittance, a consumer



transmits to its participating bank a bill pay order indicating a payment date, a payment amount, the consumer's account number with the biller, a source of funds and the biller's biller identification number, either directly or by reference to static data containing those data elements. Bank C then submits a payment message to a payment network, and the payment network, which assigns the biller reference numbers, forwards the payment message to the biller's bank. For settlement, the consumer's bank debits the consumer's account and is obligated to a net position with the payment network; likewise, the biller's bank receives a net position from the payment network and credits the biller's bank account. If the consumer's bank agrees to send non-reversible payment messages, the consumer's bank does not submit the transaction until funds are good unless the consumer's bank is willing to take the risk of loss if funds are not good, in the case of a guaranteed payment network.

24 Claims, 17 Drawing figures

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L9: Entry 2 of 2

File: USPT

Jun 15, 1993

US-PAT-NO: 5220501

DOCUMENT-IDENTIFIER: US 5220501 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Method and system for remote delivery of retail banking services

DATE-ISSUED: June 15, 1993

## INVENTOR-INFORMATION:

| NAME                | CITY       | STATE | ZIP CODE | COUNTRY |
|---------------------|------------|-------|----------|---------|
| Lawlor; Matthew P.  | Washington | DC    |          |         |
| Carmody; Timothy E. | McLean     | VA    |          |         |

## ASSIGNEE-INFORMATION:

| NAME                   | CITY       | STATE | ZIP CODE | COUNTRY | TYPE CODE |
|------------------------|------------|-------|----------|---------|-----------|
| Online Resources, Ltd. | Washington | DC    |          |         | 02        |

APPL-NO: 07/448170 [PALM]

DATE FILED: December 8, 1989

INT-CL: [05] G06F 15/30

US-CL-ISSUED: 364/408; 902/24, 379/90

US-CL-CURRENT: 705/40; 379/93.18, 380/29, 705/42, 705/43, 705/70, 705/77, 902/24

FIELD-OF-SEARCH: 364/400, 364/401, 364/406, 364/408, 902/1, 902/5, 902/24, 379/90, 379/91, 379/93, 379/96

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

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| PAT-NO                                  | ISSUE-DATE    | PATENTEE-NAME    | US-CL   |
|---|---------------|------------------|---------|
| <input type="checkbox"/> <u>3375500</u> | March 1968    | Fowler et al.    | 379/96  |
| <input type="checkbox"/> <u>3648020</u> | March 1972    | Tateisi et al.   | 364/406 |
| <input type="checkbox"/> <u>3652795</u> | March 1972    | Wolf et al.      | 379/94  |
| <input type="checkbox"/> <u>3920926</u> | November 1975 | Lenaerts et al.  | 379/93  |
| <input type="checkbox"/> <u>3970992</u> | July 1976     | Boothroyd et al. | 364/900 |
| <input type="checkbox"/> <u>4017835</u> | April 1977    | Randolph         | 379/91  |

|                          |                |                |                    |            |
|--------------------------|----------------|----------------|--------------------|------------|
| <input type="checkbox"/> | <u>4186438</u> | January 1980   | Benson et al.      | 364/200    |
| <input type="checkbox"/> | <u>4277837</u> | July 1981      | Stuckert           | 235/380    |
| <input type="checkbox"/> | <u>4305059</u> | December 1981  | Benton             | 340/825.33 |
| <input type="checkbox"/> | <u>4341951</u> | July 1982      | Benton             | 235/377    |
| <input type="checkbox"/> | <u>4390968</u> | June 1983      | Hennessy et al.    | 364/900    |
| <input type="checkbox"/> | <u>4454414</u> | June 1984      | Benton             | 235/379    |
| <input type="checkbox"/> | <u>4525712</u> | June 1986      | Okano et al.       | 340/825.31 |
| <input type="checkbox"/> | <u>4536647</u> | August 1985    | Atalla et al.      | 235/379    |
| <input type="checkbox"/> | <u>4545023</u> | October 1985   | Mizzi              | 364/709.13 |
| <input type="checkbox"/> | <u>4562340</u> | December 1985  | Tateisi et al.     | 235/379    |
| <input type="checkbox"/> | <u>4575621</u> | March 1986     | Dreifus            | 235/380    |
| <input type="checkbox"/> | <u>4578530</u> | March 1986     | Zeidler            | 380/24     |
| <input type="checkbox"/> | <u>4578535</u> | March 1986     | Simmons            | 379/93     |
| <input type="checkbox"/> | <u>4594663</u> | June 1986      | Nagata et al.      | 364/401    |
| <input type="checkbox"/> | <u>4625276</u> | November 1986  | Benton et al.      | 364/408    |
| <input type="checkbox"/> | <u>4630201</u> | December 1986  | White              | 364/408    |
| <input type="checkbox"/> | <u>4634845</u> | January 1987   | Hale et al.        | 235/380    |
| <input type="checkbox"/> | <u>4654482</u> | March 1987     | DeAngelis          | 379/95     |
| <input type="checkbox"/> | <u>4678895</u> | July 1987      | Tateisi et al.     | 235/379    |
| <input type="checkbox"/> | <u>4683536</u> | July 1987      | Yamamoto           | 364/408    |
| <input type="checkbox"/> | <u>4689478</u> | August 1987    | Hale et al.        | 235/380    |
| <input type="checkbox"/> | <u>4694397</u> | September 1987 | Grant et al.       | 364/408    |
| <input type="checkbox"/> | <u>4713761</u> | December 1987  | Sharpe et al.      | 364/408    |
| <input type="checkbox"/> | <u>4803347</u> | February 1989  | Sugahara et al.    | 235/379    |
| <input type="checkbox"/> | <u>4823264</u> | April 1989     | Deming             | 364/408    |
| <input type="checkbox"/> | <u>4850007</u> | July 1989      | Marino et al.      | 379/67     |
| <input type="checkbox"/> | <u>4947028</u> | August 1990    | Gorog              | 235/381    |
| <input type="checkbox"/> | <u>4991199</u> | February 1991  | Parekh             | 379/97     |
| <input type="checkbox"/> | <u>5008927</u> | April 1991     | Weiss et al.       | 379/98     |
| <input type="checkbox"/> | <u>5025373</u> | June 1991      | Keyser, Jr. et al. | 364/408    |
| <input type="checkbox"/> | <u>5050207</u> | September 1991 | Hitchcock          | 379/96     |

## FOREIGN PATENT DOCUMENTS

| FOREIGN-PAT-NO | PUBN-DATE   | COUNTRY | CLASS |
|----------------|-------------|---------|-------|
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ABSTRACT:

A practical system and method for the remote distribution of financial services (e.g., home banking and bill-paying) involves distributing portable terminals to a user base. The terminals include a multi-line display, keys "pointer to" lines on the display, and additional keys. Contact is established between the terminals and a central computer operated by a service provider, preferably over a dial-up telephone line and a packet data network. Information exchange between the central computer and the terminal solicits information from the terminal user related to requested financial services (e.g., for billpaying, the user provides payee selection and amount and his bank account PIN number). The central computer then transmits a message over a conventional ATM network debiting the user's bank account in real time, and may pay the specified payees the specified amount electronically or in other ways as appropriate. Payments and transfers may be scheduled in advance or on a periodic basis. Because the central computer interacts with the user's bank as a standard POS or ATM network node, no significant software changes are required at the banks' computers. The terminal interface is extremely user-friendly and incorporates some features of standard ATM user interfaces so as to reduce new user anxiety.

51 Claims, 50 Drawing figures

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